Appl' No.: 09/942,609

Amdt. Dated: November 7, 2005

Response to Office Action of July 12, 2005

Amendments to the Claims:

Please amend the claims as follows.

1. (previously presented) A method of speech recognition in order to identify a speech command as a match to a written text command comprising the steps:

providing a text input from a text database;

receiving an acoustic input;

generating sequences of multilingual phoneme symbols based on said text input by means of a multilingual text-to-phoneme module;

generating variations of pronunciations which are recognizable in response to said sequences of multilingual phoneme symbols determined by use of a branched grammar; and

comparing said variations of pronunciations with the acoustic input in order to find a match.

- 2. (previously presented) A method according to claim 1 wherein the text input is processed letter by letter, and wherein a neural network provides an estimate of the posterior probabilities of the different phonemes for each letter.
- 3. (previously presented) A method according to claim 1 comprising deriving said text input from a database containing user entered text strings.
 - 4. (previously presented) A system for speech recognition comprising:
 - a text database for providing a text input;

transducer means for receiving an acoustic input;

a multilingual text-to-phoneme module for outputting sequences of multilingual phoneme symbols based on said text input;

a pronunciation lexicon module receiving said sequences of multilingual phoneme symbols from said multilingual text-to-phoneme module, and for generating variations of pronunciations which are recognizable in response thereto which are determined by a branched grammar; and

a multilingual recognizer based on multilingual acoustic phoneme models for comparing said variations of pronunciations generated by the pronunciation lexicon module with the acoustic input in order to find a match.

- 5. (previously presented) A system according to claim 4, wherein the multilingual text-to phoneme module processes said text input letter by letter, and comprises a neural network for giving an estimate of the posterior probabilities of the different phonemes for each letter.
- 6. (previously presented) A system according to claim 5 wherein the neural network is a standard fully connected feed-forward multi-layer perceptron neural network.
- 7. (previously presented) A system according to claim 4 wherein the text input is derived from a database containing user entered text strings.
- 8. (previously presented) A system according to claim 7 wherein the database containing user entered text strings is an electronic phonebook including phone numbers and associated name labels.

Appl No.: 09/942,609

Amdt. Dated: November 7, 2005

Response to Office Action of July 12, 2005

9. (previously presented) A communication terminal including a speech recognition unit comprising:

a text database for providing a text input;

transducer means for receiving an acoustic input;

a multilingual text-to-phoneme module for outputting sequences of multilingual phoneme symbols based on said text input;

a pronunciation lexicon module receiving said sequences of multilingual phoneme symbols from said multilingual text-to phoneme module, and for generating variations of pronunciations in response thereto which are determined by a branched grammar; and

a multilingual recognizer based on multilingual acoustic phoneme models for comparing said variations of pronunciations generated by the pronunciation lexicon module with the acoustic input in order to find a match.

- 10. (previously presented) A communication terminal according to claim 9, wherein the multilingual text-to phoneme module processes said text input letter by letter, and comprises a neural network for giving an estimate of the posterior probabilities of the different phonemes for each letter.
- 11. (previously presented) A communication terminal according to claim 10 wherein the neural network is a standard fully connected feed-forward multi-layer perceptron neural network.
- 12. (previously presented) A communication terminal according to claim 9 wherein the text input is derived from a database containing user entered text strings.
- 13. (previously presented) A communication terminal according to claim 12 wherein the database containing user entered text strings is an electronic phonebook including phone numbers and associated name labels.
- 14. (new) A method according to claim 1, wherein generating variations of pronunciations determined by use of a branched grammar comprises use of a weighted branched grammar in which the weightings are representative of probabilities of the phonemes of said sequences of multilingual phoneme symbols.
- 15. (new) A method according to claim 1, wherein said sequences of multilingual phoneme symbols comprise a complete and non-redundant set of multilingual phoneme symbol sequences for languages supported by said multilingual text-to-phoneme module.
- 16. (new) A method according to claim 1, wherein generating sequences of multilingual phoneme symbols comprises generating a weighted branched grammar in which the weightings are representative of probabilities of the phonemes of said sequences of multilingual phoneme symbols.
- 17. (new) A method according to claim 1, wherein generating variations of pronunciations determined by use of a branched grammar comprises capturing intra-language and inter-language pronunciation variations of said text input in said branched grammar of said sequences of multilingual phoneme symbols.
- 18. (new) A system according to claim 4, wherein said pronunciation lexicon module uses a weighted branched grammar for determining variations of pronunciations in which the weightings are representative of probabilities of the phonemes of said sequences of multilingual phoneme symbols.

Appl No.: 09/942,609

Amdt. Dated: November 7, 2005

Response to Office Action of July 12, 2005

19. (new) A system according to claim 4, wherein said multilingual text-to-phoneme module generates said sequences of multilingual phoneme symbols to correspond to a complete and non-redundant set of multilingual phoneme symbol sequences for languages supported by said multilingual text-to-phoneme module.

- 20. (new) A system according to claim 4, wherein said multilingual text-to-phoneme module outputs the sequences of multilingual phoneme symbols in a weighted branched grammar in which the weightings are representative of probabilities of the phonemes of said sequences of multilingual phoneme symbols.
- 21. (new) A system according to claim 4, wherein said pronunciation lexicon module captures intra-language and inter-language pronunciation variations of said text input in said branched grammar of said sequences of multilingual phoneme symbols.
- 22. (new) A communication terminal according to claim 9, wherein said pronunciation lexicon module uses a weighted branched grammar for determining variations of pronunciations in which the weightings are representative of probabilities of the phonemes of said sequences of multilingual phoneme symbols.
- 23. (new) A communication terminal according to claim 9, wherein said multilingual text-to-phoneme module generates said sequences of multilingual phoneme symbols to correspond to a complete and non-redundant set of multilingual phoneme symbol sequences for languages supported by said multilingual text-to-phoneme module.
- 24. (new) A communication terminal according to claim 9, wherein said multilingual text-to-phoneme module outputs the sequences of multilingual phoneme symbols in a weighted branched grammar in which the weightings are representative of probabilities of the phonemes of said sequences of multilingual phoneme symbols.
- 25. (new) A communication terminal according to claim 9, wherein said pronunciation lexicon module captures intra-language and inter-language pronunciation variations of said text input in said branched grammar of said sequences of multilingual phoneme symbols.